

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

ORDER NO. 78-29

WASTEWATER RECLAMATION REQUIREMENTS FOR:

CITY OF MILL VALLEY, MILL VALLEY SCHOOL DISTRICT,
TAMALPAIS UNION HIGH SCHOOL DISTRICT,
AND MARIN MUNICIPAL WATER DISTRICT,
MARIN COUNTY

The California Regional Water Quality Control Board, San Francisco Bay Region, finds that:

1. The City of Mill Valley, hereinafter referred to as the discharger, together with the other parties named above, hereinafter referred to as the users, have applied for wastewater reclamation requirements for landscape irrigation purposes.
2. The discharger, in a letter dated July 22, 1977, proposes to transport up to 100,000 gallons per day of secondary treated municipal wastewater from the City's wastewater treatment plant for landscape spray irrigation. This irrigation will occur at the following properties:

<u>Property</u>	<u>User</u>	<u>Acreage</u>
Hauke Park	City of Mill Valley	4.4
Public Safety Bldg.	City of Mill Valley	2.0
Miller Ave. Medians	City of Mill Valley	2.0
Boyle Park -ball field area	City of Mill Valley	7.0
Proposed Bay Front Park	City of Mill Valley	25.0
Middle School	Mill Valley School District	5.2
Tamalpais High School	Tamalpais Union High School District	10.4
	Total	56.0 acres

The locations of these properties are shown in Attachment A, which is hereby made part of this Order. Marin Municipal Water District, as the purveyor of water to the proposed sites, will operate and maintain the major transmission facilities for reclaimed wastewater.

3. Section 13523 of the California Water Code provides that a regional board, after consulting with and receiving the recommendations of the State Department of Public Health, and if it determines such action to be necessary to protect the public health, safety, or welfare, shall prescribe water reclamation requirements for water which is used or proposed to be used as reclaimed water. The use of reclaimed water for the purpose specified in Finding 2 could affect the public health, safety, or welfare, and requirements for that use are therefore necessary in accordance with the Water Code.

4. The Board adopted a Water Quality Control Plan for San Francisco Bay Basin in April 1975. The water quality objectives for reclaimed wastewater, as set forth in the Basin Plan, specify those limits prescribed in Title 17, Section 8025 through 8050, California Administrative Code. These objectives have been superseded by Title 22, Section 60301 - 60357, California Administrative Code.
5. This Regional Board has notified the City of Mill Valley the Mill Valley School District, the Marin Municipal Water District, Tamalpais Union High School District, and interested agencies and persons of its intent to prescribe water reclamation requirements for the proposed uses.
6. This Board at a public meeting heard and considered all comments pertaining to this reuse.

IT IS HEREBY ORDERED that the discharger and users, in order to meet the provisions contained in Division 7 of the California Water Code and regulations adopted thereunder, shall comply with the following:

A. Reclaimed Wastewater Quality Specifications

1. The reclaimed water shall be at all times an adequately disinfected, oxidized water and shall meet the following quality limits at all times:

Turbidity	10 units maximum
Chlorine Residual	1.0 mg/l minimum

Treated effluent shall not be diverted for reclamation until compliance with the above limitations is assured.

Coliform Organisms	Median MPN shall not exceed 2.2 coliform organisms per 100 milliliter of sample at some point in the treatment process. The median value will be determined from the bacteriological results of the last seven analyses.
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5-day BOD	20 mg/l maximum
Dissolved Oxygen	1.0 mg/l minimum
Dissolved Sulfide	0.1 mg/l maximum

2. Treated effluent which is diverted for reclamation shall not be dechlorinated.

B. Reclaimed Wastewater Use Limitations

1. The treatment, distribution, or reuse of reclaimed water shall not create a nuisance as defined in Section 13050(m) of the California Water Code.
2. Use of reclaimed wastewater shall be limited to the areas specified in Finding 2 of this Order unless written authorization is obtained from the Executive Officer.

3. Wastewater shall be applied to use areas only between the hours of 10 p.m. and 6 a.m., and shall be applied in such a manner as to minimize public exposure to spray droplets.
4. Areas irrigated with reclaimed wastewater shall be clearly identified with posted notices to the public. The method and form of notification shall be subject to the review and approval of the Executive Officer.
5. All areas designated for use by children, six or younger, shall be enclosed by fence, or other approved means, to isolate the areas from adjacent areas where adjacent areas are irrigated with reclaimed wastewater.
6. All equipment, including pumps, piping, and valves, etc., which may at any time contain waste shall be adequately and clearly identified with warning signs, and the discharger shall make all necessary provisions, in addition, to inform the public that the liquid contained is sewage and is unfit for human consumption.
7. Reclaimed wastewater shall not be applied:
 - . on areas designated for use by children, six or younger;
 - . within 50 feet of picnic tables or drinking fountains;
 - . on the one median area located between Tamalpias Union High School and Safeway Store, and in front of Middle School where students routinely sit and eat their lunches.
8. No wastewater shall be applied to the disposal areas during periods of rainfall or when soils are saturated.
9. No reclaimed wastewater used for irrigation shall be allowed to escape to any area outside the disposal areas, either by surface flow or airborne spray except for minor runoff resulting from best irrigation practice.

C. Provisions

1. This Order includes items 1, 2, 3, 4, 5, 7, 8, 9, and 10 of the attached "Requirements of Design for Reclamation Facilities" dated October 1, 1975.
2. A satisfactory method for assuring that the treated effluent complies with the turbidity and chlorine residual requirements before it is diverted to the reclamation system shall be developed and reported to the Executive Officer prior to commencement of such diversion of treated effluent.
3. The discharger and users shall file with the Regional Board technical reports on self-monitoring work performed according to detailed specifications as directed by the Executive Officer.

4. The discharger and users shall permit the Regional Board or its authorized representative:
 - a. Entry upon premises in which an effluent source is located or in which any required records are kept.
 - b. Access to copy any records required to be kept under terms and conditions of this Order.
 - c. Inspection of any monitoring equipment or method required by this Order.
 - d. Sampling of any discharge.
5. The discharger and users shall maintain in goodworking order and operate as efficiently as possible any facility or control system installed by the user to achieve compliance with the water reclamation requirements.
6. The discharger and users shall file with the Regional Board a report on waste discharge at least 180 days before making any material change or proposed change in the character, location or volume of reuse.

I, Fred H. Dierker, Executive Officer, do hereby certify the foregoing is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, San Francisco Bay Region, on **April 18, 1978.**

FRED H. DIERKER
Executive Officer

Attachments:

A - Map
Requirements of Design for
Reclamation Facilities dated 10/1/75
Self-Monitoring Program

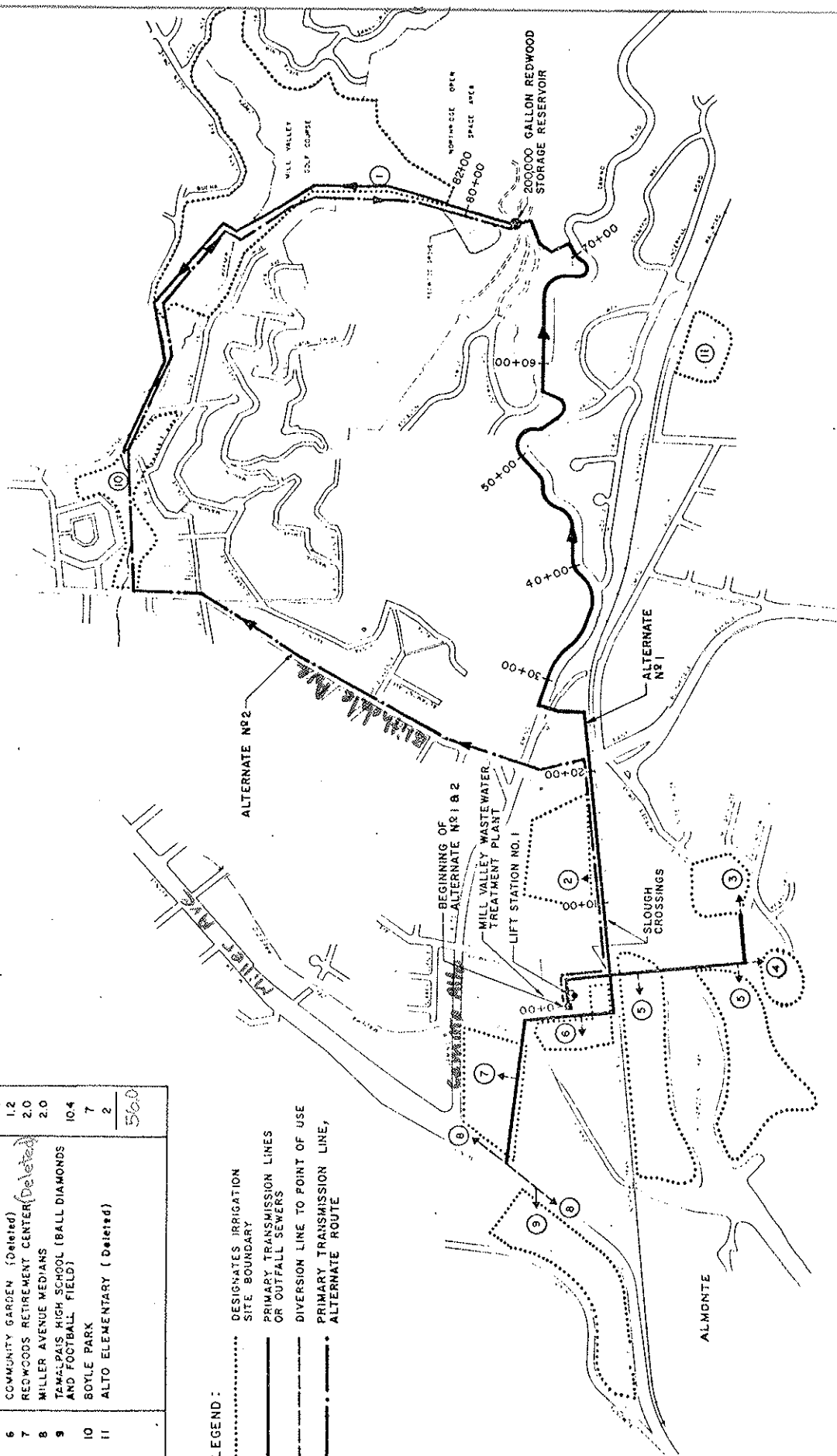
ATTACHMENT A PROPOSED RECLAMATION PROJECT

covered by Order # 76-97

NO.	DESCRIPTION	ACRES
1	MUNICIPAL GOLF COURSE	400
2	MIDDLE SCHOOL (BALL DIAMOND AND ADJACENT AREAS)	5.2
3	MAYKE PARK	4.4
4	PUBLIC SAFETY BUILDING	2.0
5	PROPOSED BAY FRONT PARK	25.0
6	COMMUNITY GARDEN (Deleted)	1.2
7	REDWOODS RETIREMENT CENTER (Deleted)	2.0
8	MILLER AVENUE MEDIANS	2.0
9	TANALPAIS HIGH SCHOOL (BALL DIAMONDS AND FOOTBALL FIELDS)	10.4
10	BOYLE PARK	7
11	ALTO ELEMENTARY (Deleted)	2
		560

LEGEND :

- DESIGNATES IRRIGATION SITE BOUNDARY
- PRIMARY TRANSMISSION LINES OR OUTFALL SEWERS
- DIVERSION LINE TO POINT OF USE
- PRIMARY TRANSMISSION LINE, ALTERNATE ROUTE



2

0 300 600
SCALE - FEET

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

OCTOBER 1, 1975

REQUIREMENTS OF DESIGN FOR RECLAMATION FACILITIES

1. Flexibility of Design. The design of process piping, equipment arrangement, and unit structures in the reclamation plant must allow for efficiency and convenience in operation and maintenance and provide flexibility of operation to permit the highest possible degree of treatment to be obtained under varying circumstances.
2. Emergency Storage or Disposal. (a) Where short-term retention or disposal provisions are used as a reliability feature, these shall consist of facilities reserved for the purpose of storing or disposing of untreated or partially treated wastewater for at least a 24-hour period. The facilities shall include all the necessary diversion devices, provisions for odor control, conduits, and pumping and pump-back equipment. All of the equipment other than the pump-back equipment shall be either independent of the normal power supply or provided with a standby power source.

(b) Where long-term storage or disposal provisions are used as a reliability feature, these shall consist of ponds, reservoirs, percolation areas, downstream sewers leading to other treatment or disposal facilities reserved for the purpose of emergency storage or disposal of untreated or partially treated wastewater. These facilities shall be of sufficient capacity to provide disposal or storage of wastewater for at least 20 days, and shall include all the necessary diversion works, provisions for odor and nuisance control, conduits, and pumping and pump-back equipment. All of the equipment other than the pump-back equipment shall be either independent of the normal power supply or provided with a standby power source.

(c) Diversion to a less demanding reuse is an acceptable alternative to emergency disposal of partially treated wastewater provided that the quality of the partially treated wastewater is suitable for the less demanding reuse.

(d) Subject to prior approval by the regulatory agency, diversion to a discharge point which requires lesser quality of wastewater is an acceptable alternative to emergency disposal of partially treated wastewater.

(e) Automatically actuated short-term retention or disposal provisions and automatically actuated long-term storage or disposal provisions shall include, in addition to provisions of (a), (b), (c), or (d) of this section, all the necessary sensors, instruments, valves and other devices to enable fully automatic diversion of untreated or partially treated wastewater to approved emergency storage or disposal in the event of failure of a treatment process, and a manual reset to prevent automatic restart until the failure is corrected.

- (2) Alarm, short-term retention or disposal provisions, and standby replacement equipment;
 - (3) Alarm and long-term storage or disposal provisions;
 - (4) Automatically actuated long-term storage or disposal provisions,
or
 - (5) Alarm and standby coagulation process.
7. Filtration. All filtration unit processes shall be provided with one of the following reliability features:
- (a) Alarm and multiple filter units capable of treating the entire flow with one unit not in operation.
 - (b) Alarm, short-term retention or disposal provisions and standby replacement equipment.
 - (c) Alarm and long-term storage or disposal provisions.
 - (d) Automatically actuated long-term storage or disposal provisions.
 - (e) Alarm and standby filtration unit process.
8. Disinfection.
- (a) All disinfection unit processes where chlorine is used as the disinfectant shall be provided with the following features for uninterrupted chlorine feed:
 - (1) Standby chlorine supply,
 - (2) Manifold systems to connect chlorine cylinders
 - (3) Chlorine scales, and
 - (4) Automatic devices for switching to full chlorine cylinders.

Automatic residual control of chlorine dosage, automatic measuring and recording of chlorine residual, and hydraulic performance studies may also be required.
 - (b) All disinfection unit processes where chlorine is used as the disinfectant shall be provided with the following reliability features:
 - (1) Alarm and standby chlorinator;
 - (2) Alarm, short-term retention, or disposal provisions, and standby replacement equipment;
 - (3) Alarm and long-term storage or disposal provisions;

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

SELF-MONITORING PROGRAM
FOR

City of Mill Valley, Mill Valley School District,
Tamalpais Union High School District,
... & Marin Municipal Water District,
Marin County, Reclaimed Wastewater Irrigation Project

ORDER NO. 78-29

A. GENERAL

Reporting responsibilities of waste dischargers are specified in Sections 13225(a), 13267(b), 13268, 13383, and 13387(b) of the California Water Code and this Regional Board's Resolution No. 73-16.

The principal purposes of a monitoring program by a waste discharger, also referred to as self-monitoring program, are: (1) to document compliance with waste discharge requirements and prohibitions established by this Regional Board, (2) to facilitate self-policing of the waste discharge, (3) to develop or assist in the development of effluent or other limitations, discharge prohibitions, national standards of performance; pre-treatment and toxicity standards, and other standards, and (4) to prepare water and wastewater quality inventories.

B. MONITORING PROGRAM AND PLANT SUPERVISION

1. Schedule for sampling, and analyses of effluent shall be performed as shown on Table 1.
2. Each user of reclaimed wastewater shall inspect weekly for the following:

- a) Presence of odors as a result of spray application of wastewater, noting the presence or absence, character, source, and distance and direction of travel.
- b) Evidence of any ponded water outside the property due to spray application and runoff of reclaimed wastewater.

Inspection stations, not more than 300 feet apart, shall be established along the perimeter of each irrigation area. Observations shall be reported for each station and all violations will be located on a sketch. The sketch will accompany every report and show the irrigation areas and inspection stations.

3. The treatment plant shall be attended by an operator whenever treated effluent is diverted to the reclamation system.

C. REPORTS TO BE FILED WITH THE REGIONAL BOARD

1. Violations of Requirements

In the event the discharger or any user is unable to comply with the conditions of the waste discharge requirements and prohibitions for any reason the discharger or user shall notify the Regional Board and the County Health Department office by telephone as soon as he or his agents have knowledge of the incident and confirm this notification in writing within two weeks of the telephone notification. The written report shall include pertinent information explaining reasons for the non-compliance and shall indicate what steps were taken to prevent the problem from recurring.

2. Regular monthly Self-Monitoring Reports shall be sent to the Regional Board by the fifteenth of the following month. The attached monitoring summary report form shall be used and submitted to both the Regional Board and County Health Department.

I, Fred H. Dierker, Executive Officer, do hereby certify that the foregoing Self-Monitoring Program:

1. Has been developed in accordance with the procedure set forth in this Regional Board's Resolution No. 73-16 in order to obtain data and document compliance with waste discharge requirements established in Regional Board Order No. 78-29.
2. Has been ordered by the Executive Officer on April 18, 1978, and becomes effective immediately.
3. May be reviewed at any time subsequent to the effective date upon written notice from the Executive Officer or request from the discharger and revisions will be ordered by the Executive Officer.

FRED H. DIERKER
Executive Officer

Attachments:

Table 1
Monitoring Summary

MONITORING SUMMARY FOR WASTEWATER RECLAMATION

DISCHARGER: _____

ORDER NO. _____

YEAR	FLOW	TOTAL COLIFORM		CHLORINE RESIDUAL	DO	BOD ₅	DISSOLVED SULFIDE	Use
MONTH	TOTAL GALLONS RECLAIMED	MPN/100 ml	MPN/100 ml 7 DAY MEDIAN (2.2 MPN/100 ml)	mg/l DAILY MINIMUM 1.0	mg/l (1.0 mg/l min)	mg/l (20 mg/l max)	mg/l (0.1 mg/l max)	Gallons & Location of Irrigation
DAY								
1								
2								
3								
4								
5								
6								
7								
8								
9								
10								
11								
12								
13								
14								
15								
16								
17								
18								
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22								
23								
24								
25								
26								
27								
28								
29								
30								
31								
MIN								
MAX								
AVE								

TABLE I
SCHEDULE FOR SAMPLING, MEASUREMENTS, AND ANALYSES

SAMPLING STATIONS	E-001	A-001 thru A-00'n							
TYPE OF SAMPLES	G ^{1/}	O							
Reclaimed Wastewater Volume (gallons/day) ^{2/}	D								
Coliforms (MPN)	D								
Chlorine Residual (mg/l)	H								
Turbidity (JTU)	H								
Dissolved Sulfide	D								
BOD (mg/l)	D								
Dissolved Oxygen	D								
Sampling of individual users in compliance with wastewater requirements		W							

LEGEND

Type of Sample

G = grab sample
O = observation

Station

E-001 = station(s) where a representative sample of treatment plant effluent being diverted for reclamation can be obtained and total diverted flow can be measured.

A-001 thru A-00'n = Inspection stations

Frequency of Sampling

H = once each hour
D = once each day
W = one each week

^{1/}Samples are required to be taken only at times when reclaimed wastewater is being diverted.

^{2/}Reclaimed wastewater volume shall be listed for the amounts used by each user and diverted to storage each day.